



Beliefs and Values in Colorado Water Policy

Colorado Institute of Public Policy

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- ◆ Address pressing policy issues in the Rocky Mountain West
- ◆ Most significant challenges are complex, therefore problem solving requires integrating multiple dimensions through:
 - interdisciplinary research
 - external partnerships
 - community outreach

Activities and Products

- ◆ **White papers** - research documents that explore public policy issues by drawing on the expertise of stakeholders, communities and research faculty
- ◆ **Interdisciplinary grants** for faculty research
- ◆ **Contract services** for local and state government agencies to creatively solve problems and address community needs
- ◆ **Conferences** that share new and informed perspectives with business, academic, legislative and other audiences

The Strange World of CIPP Methodologies

- ◆ Cognitive mapping
- ◆ GIS
- ◆ Network analysis
- ◆ Q-Methodology

The World of Q

- ◆ Q-Methodology in wikipedia!
 - http://en.wikipedia.org/wiki/Q_method
- ◆ Q – *A Method for Modern Research*
 - <http://www.qmethod.org/>
 - Conferences
 - Listserv
 - Articles
 - Annotated bibliography
 - Data analysis software
- ◆ *Journal of Human Subjectivity* (JHS), a Q journal
 - <http://www.byunglee.org/jhs/>

Gone are the days of paper sorting

◆ Q's on line are increasingly popular

- Use of Web CT (Joy Coogan)
<http://homepages.uel.ac.uk/J.Coogan/study1wq.htm>
- SWAP-II (Shedler-Westen Assessment Procedure)
www.psychsystems.net/guest.cfm
- Community by Design (Lyn Kathlene)
http://eeohawk.unl.edu/sc_survey/

Living in the Rocky Mountain West: 2025

- ◆ Series of pressing policy issues facing the intermountain West:
 - Demographics
 - Energy
 - Governance
 - Public health
 - Development
 - Water

Water is Fundamental

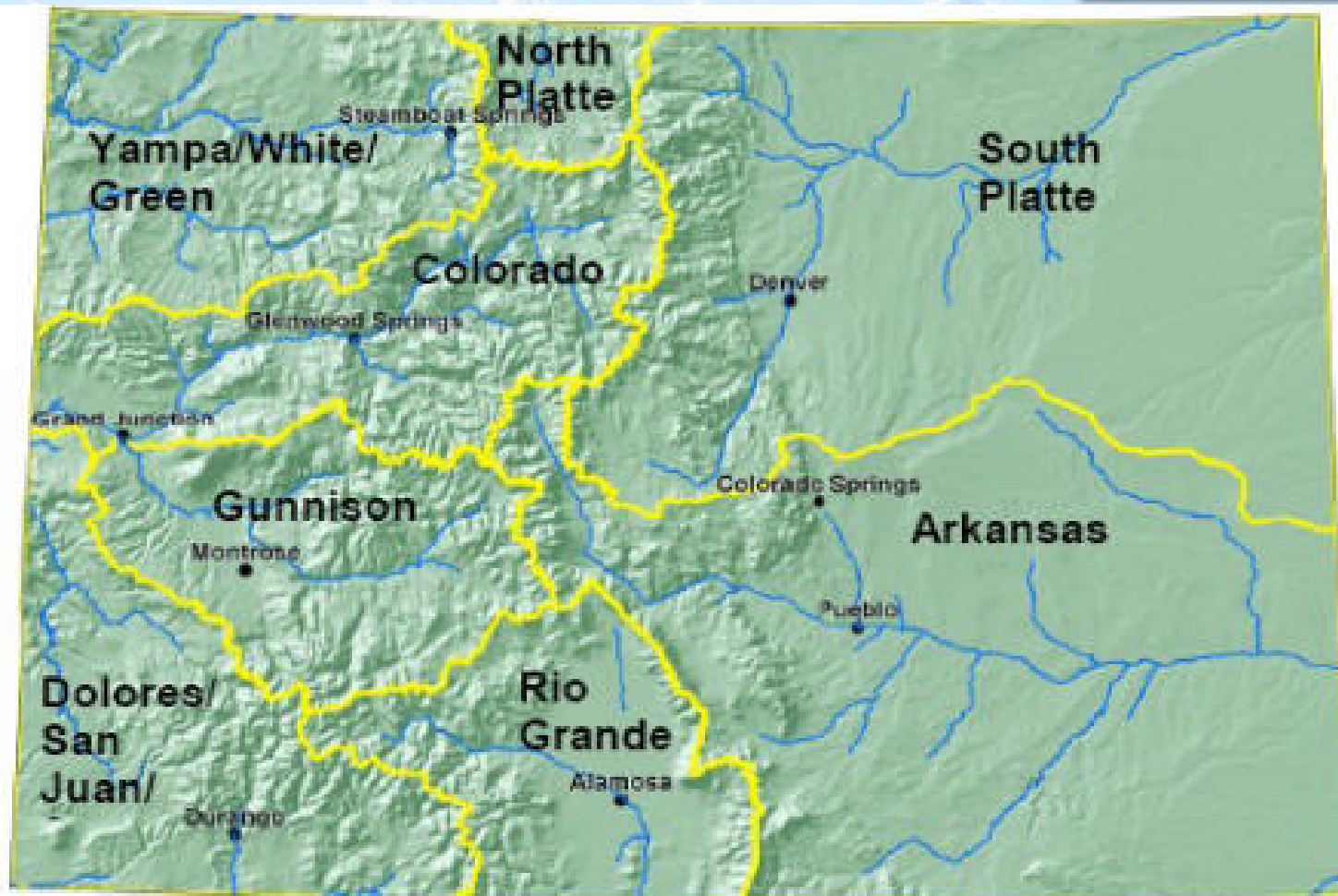
- ◆ Economy
- ◆ Quality of life
- ◆ Environment
- ◆ Life itself



Conflict or Cooperation?

- ◆ How do we address:
 - scarcity
 - increasing demand
 - new uses
 - declining quality
- ◆ “Whiskey’s for drinking, water’s for fighting”
- ◆ Interstate compacts; basin negotiations

Water basin roundtables



HB1177 Requirements for Roundtable Membership

- ◆ One member from city or county
- ◆ One municipal member from each county
- ◆ One member from each water conservancy or water conservation district
- ◆ One member appointed by the legislature
- ◆ Ten at-large members, one from each interest –
 - Environment, agriculture, recreation, local domestic water provider, industry, and at least five who own adjudicated water rights

Roundtable Composition

- ◆ Size of roundtables range:
 - 18 members in North Platte basin) to
 - 51 members (Arkansas basin)
- ◆ Total of 286 people participating on the nine roundtables
- ◆ Brings together the water buffalos with water interests on the periphery and new faces

Challenge of Collaboration

- ◆ Contentious policy domains start at fighting for favorite solutions
- ◆ Need to step back to beliefs -- to our interests
 - Lenses by which we define the problem
 - Problem definition determines solutions
- ◆ Understanding beliefs is key

Water Survey – The Q

- ◆ Only major stakeholders participate
 - Important to have major groups
 - Number in a group does not influence results
- ◆ Used in contentious policy arenas
 - Strong opinions
 - Forces prioritization

Identification of stakeholders

Four-tiered approach:

1. Faculty, state agencies, key interest groups.
2. Snowball from first group.
 - Identification of those with similar views
 - Identification of those with contrary views
3. Snowball from second group.
4. Members of all nine water basin roundtables.

Types of statements

1. Beliefs and values

- *Water conservation will solve water shortages.*
- *Water is best managed and allocated by market forces.*

2. Current and future challenges

- *Preparing for future droughts.*
- *Transferring water to high growth areas/sectors.*

3. Strategies to address water challenges

- *Link land use planning and water planning.*
- *Pursue construction of new reservoirs.*

Pilot

- ◆ Sample of statement generators piloted survey and water community stakeholders (n=8)
- ◆ Revised
- ◆ Water community stakeholders in each interest group area: AG, M&I, Recreation, and Environment (n=10)

Q-Sort Statement Array

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Statewide Distribution

◆ Developed on-line water Q-sort

- http://www.colostate.edu/~cwis245/WR/survey_demo.html

Response Rate

Table 4. Survey Participation Rates

Recruitment group	Number invited ¹	Number who agreed to participate	Percent who agreed to participate
Key interest group stakeholders ²	50	47	94%
Arkansas Basin	30	18	60%
Colorado Basin	18	11	61%
Dolores/San Juan Basin	10	5	50%
Gunnison Basin	17	8	47%
Metro Basin	14	11	79%
North Platte Basin	2	0	0%
Rio Grande Basin	8	5	63%
South Platte Basin	27	16	59%
Yampa/White/Green Basin	15	11	73%
TOTAL AGREED	191	132	69%
Less # technology problems		- 5	
Less # who agreed but did not take survey ³		- 43	
TOTAL PARTICIPANTS		84	

¹ Among the basin roundtable members, only those that had active email addresses were contacted. Not all basins had identified all their members as of October 24, 2005, or had full contact information available for the members.

² Some interest group stakeholders were also members of a water basin roundtable.

³ A reminder was sent to each participant. One person decided not to participate after viewing the survey. The remaining non-participants did not respond to the reminder.

Affiliations of Survey Participants

AFFILIATION	% OF PARTICIPANTS
Agriculture	33%
Municipal Water Provider	26%
Water Conservancy District	21%
Elected Official	20%
Environmental/Conservation	20%
Public Utility	18%
Recreation/Tourism	16%
Other ²	16%
Consultant	14%
Private Enterprise	14%
Irrigation District	12%
Water Conservation District	11%
Mutual Irrigation District	7%
Engineering	6%
Legal	4%
Research/University	4%
Rural Water District	4%

¹ Multiple affiliations were possible; therefore total percentage exceeds 100%.

Survey 1: Beliefs and Values Types

- ◆ Articulate distinct complex beliefs and values that are memorable
- ◆ Find areas of common beliefs from which to build trust
- ◆ Identify how divergent beliefs emerge out of common ground

Everyone agrees...

- ◆ Water is fundamental to the economy
- ◆ An appropriated right does not mean water will be available for use
- ◆ Agricultural water is the prime target for water transfers to urban and recreational uses

Most everyone agrees...

- ◆ Money has become the driver for allocating water
- ◆ The market is not always the appropriate method for allocating water
- ◆ It is important to protect existing individual water rights
- ◆ Water court decisions have been favorable to agricultural interests
- ◆ Current water law is quite functional

But there are also disagreements about...

- ◆ The “use it or lose it” doctrine
- ◆ Whether there is a disconnect between land use and water planning
- ◆ Whether the recent drought proved the current water system works well or not
- ◆ Whether there is plenty of water if used wisely OR
- ◆ If new water needs to be developed
- ◆ Whether or not environmental claims have adequate legal standing

Six Belief Types

- ◆ Statewide Economic Growth
- ◆ Environmental Concerns
- ◆ Living within Our Limits
- ◆ Stay the Course
- ◆ Broken System
- ◆ State Rights

Do these groups share any common beliefs?

Statewide Economic Growth and Environmental Concerns

1. Environmental needs should have similar standing in water law
2. Water conservation are important policies to implement
3. Using less water does not mean our quality of life will be lowered
4. Markets are not always the best mechanism for allocating water

But what makes them different?

Statewide Economic Growth versus Environmental Concerns

Differ on whether or not land use planning and water planning are adequately connected:

- The *Statewide Economic Growth* group believes the current system is working fine.
- The *Environmental Concerns* strongly believe there is a disconnect between the two types of planning, which is detrimental to the long-term sustainability of water.

But what did the survey do for basin members?

- ◆ The types provided fuel for thought.
- ◆ Most were able to see a type that described them best.
- ◆ Examined the beliefs of others.

Basin members asked themselves:

- ◆ Who am I?
- ◆ Do I know people in the other types?
- ◆ Do I see new information?
- ◆ Do I see commonalities I didn't know or consider before?
- ◆ How can this information help me/my sector/my basin as we deliberate about the future of water?

Survey 2: Challenges

- ◆ Prioritize current and future water challenges facing the West.
- ◆ Find the relationship between beliefs about water and perceptions of problems.

Three Types of Challenges

- ◆ Balancing Consumptive Use Needs
- ◆ Water Sustainability
- ◆ Institutional Streamlining

Balancing Consumptive Use Needs

The background of the slide features a dynamic image of water splashing, with droplets and ripples visible against a blue sky. The water is white and frothy, creating a sense of movement and freshness.

- ◆ Accommodate municipal growth without harming the long-term viability of agriculture
- ◆ Solve problems through effective partnerships—local, regional, basin, federal, private, and public
- ◆ Increase cooperation among basins and states where water is a shared resource
- ◆ Prepare for future severe droughts
- ◆ Balance private property rights and public interest
- ◆ Protect water quality

Water Sustainability

The background of the slide features a dynamic image of water splashing, with droplets and ripples visible against a blue sky. The title 'Water Sustainability' is prominently displayed in the upper left corner in a bold, dark blue font.

- ◆ Maintain water quantity and quality while the population continues to grow
- ◆ Incorporate conservation and efficiency in existing water user operations
- ◆ Integrate water supply for consumptive use, environmental use, and recreational use

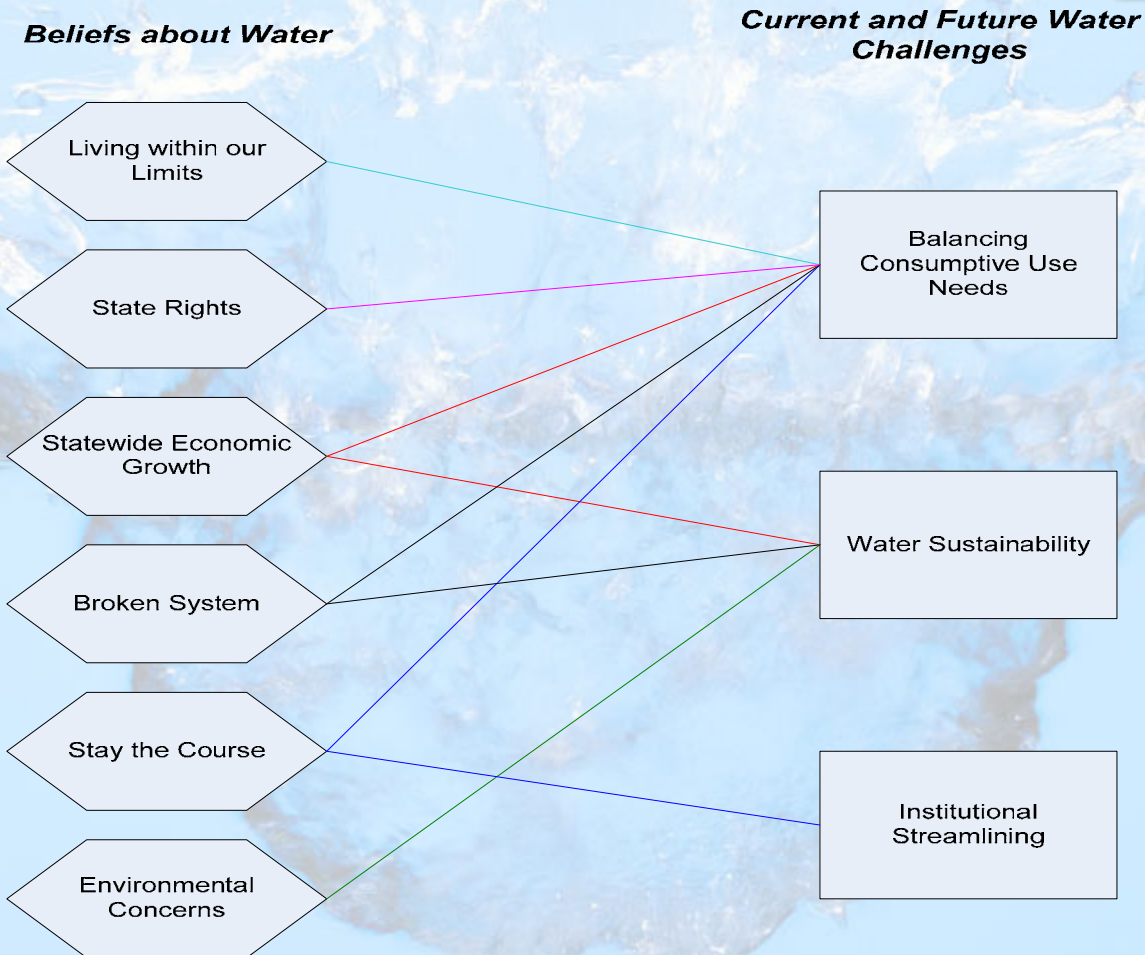
Institutional Streamlining

- ◆ Develop institutional responses to political and legal barriers for better management of water
- ◆ Address federal regulations that are impediments to solving state problems
- ◆ Streamline the water development process
- ◆ Solve problems through effective partnerships—local, regional, basin, federal, private, and public
- ◆ Prepare for future droughts
- ◆ Incorporate conservation and efficiency in existing water user operations

New Understandings

- ◆ Finding common ground across belief types.
- ◆ Discovering connections between beliefs and challenges.

Relationship between Beliefs and Challenges



Beliefs and Values Report

The report can be found on the CIPP
website at www.cipp.colostate.edu
under publications



The End

.... or Just the Beginning

The background of the slide is a vibrant blue with a dynamic water splash effect. A large, central splash of white and light blue water is the focal point, with smaller splashes and droplets visible in the upper right and left corners. The overall effect is one of movement and freshness.

Description of Six Types of Beliefs

“Statewide Economic Growth”

- ◆ *All sectors of the economy need water.*
- ◆ Economic growth depends on water.
- ◆ Ecosystems and species need water.
- ◆ Recreation and environment should have water rights.
- ◆ **Current land use & water planning are working fine.**
- ◆ Water conservation and restrictions important.
- ◆ Less water will not lower quality of life.

“Environmental Concerns”

- ◆ Ecosystems and species need water.
- ◆ **Water quality as important as water rights.**
- ◆ Less water does not lower quality of life.
- ◆ Money drives the allocation of water.
- ◆ Environment and recreation have little legal recognition
- ◆ **Land use and water planning are not connected.**
- ◆ Conservation must be pursued.
- ◆ No major new sources of water left to develop.
- ◆ Politics is the barrier to solving water problems.

“Living within our Limits”

- ◆ West slope is fighting water transfers to East slope.
- ◆ Population growth drives the need for more water.
- ◆ Money drives the allocation of water.
- ◆ Current water law recognizes all water interests.
- ◆ Plenty of water if used wisely.
- ◆ No significant new sources of water to develop.

“Stay the Course”

- ◆ Consumptive and non-consumptive uses are not in conflict.
- ◆ Agricultural water transfers alone cannot solve urban water needs.
- ◆ Use it/lose “doctrine” does not encourage waste.
- ◆ Interstate compacts important to secure Colorado’s supply.
- ◆ Federal government should not interfere with state water allocations.
- ◆ Conservation cannot substitute for new storage projects.
- ◆ Significant new water is available.

“Broken System”

- ◆ Quality of life depends on water.
- ◆ Water quality is as important as water rights.
- ◆ Drought proved the system is broken.
- ◆ “Use it or lose it” creates wasteful water practices.
- ◆ Conservation alone will not solve our water shortages.
- ◆ Consumptive and non-consumptive uses should not be in conflict.
- ◆ Money is driving the allocation of water.

“State Rights”

- ◆ Money drives allocation of water.
- ◆ Disconnect between land use and water planning.
- ◆ West slope is not in conflict with the East slope.
- ◆ Interstate compacts not in Colorado's best interests.
- ◆ Federal government should not interfere with state water allocations.
- ◆ Lack of water will not slow economic growth or population growth.
- ◆ Water in agriculture is not inefficient.
- ◆ Recreation and environment deserve water rights.
- ◆ Water recycling effective conservation strategy.
- ◆ No major new sources of water to develop.

The background of the slide is a dynamic image of water splashing, with various droplets and spray patterns in shades of blue and white. A large, semi-transparent white rectangle is centered on the slide, serving as a backdrop for the title text.

Description of Three Types of Challenges

“Balancing Consumptive Use Needs”

- ◆ Accommodate urban growth without harming agriculture.
- ◆ Increase cooperation among basins and states.
- ◆ Protect agricultural economy and way of life.
- ◆ Prepare for future severe droughts.
- ◆ Solve problems through effective partnerships.
- ◆ Balance private property rights and public interest.
- ◆ Protect water quality.

“Water Quality”

- ◆ Maintain water quantity and quality.
- ◆ Connect land use and water planning.
- ◆ Address water quality and water together.
- ◆ Protect quality of surface and groundwater.
- ◆ Incorporate water quality protection in water allocations.
- ◆ Incorporate conservation & efficiency in existing water uses.
- ◆ Meet all water needs:
 - consumptive
 - environmental
 - recreational

“Institutional Streamlining”

- ◆ Institutional responses to political and legal barriers.
- ◆ Federal regulations that impede solving state problems.
- ◆ Streamline water development process.
- ◆ Effective partnerships to solve problems.
- ◆ Prepare for future droughts.
- ◆ Balance groundwater shortages with surface water demands.
- ◆ Conservation & efficiency in existing water user operations.

Contact Information

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